

DCAMM/AEP Workforce Development and Training Advisors' Meeting Held on January 31, 2013

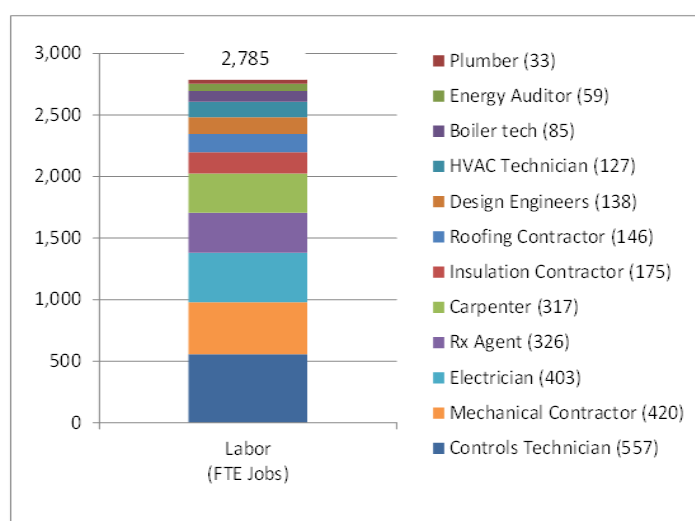
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This document provides notes from the small group break-out sessions (with added links and resources).

The DCAMM AEP Team provided the AEP Workforce Development and Training Advisors with a 30 minute presentation on the AEP including a preliminary assessment of the probable workforce needs for AEP labor. At the completion of the presentation, the AEP Workforce Development and Training Advisors participated in one of four different breakout sessions.

In the presentation before the breakout sessions, the Advisors were informed by the detailed assessment of probable full time equivalents (FTEs) to be supported by the AEP over a two to three year period (see chart above). The assessment shows how the number of FTEs to be supported by the AEP is distributed across different trades and occupations. Information like this is absolutely essential for an informed discussion of possible training and education needs during a “surge” effort like the AEP.

The following graph provides a summary of the draft assessment of probably FTEs:



Advisors were reminded briefly that job “support” was not the same as job “creation”; and that job “creation” was not the same as “job opportunities requiring newly trained workers”.

These definitions are of more than academic interest because they help inform decisions by training and education providers about the need for expansion of existing training programs, or creation of new ones, to meet employer needs. Although there was limited time to explore these terms further at the meeting of Advisors, it is useful to provide fuller information for this report.

“Job support” can be defined as the insertion of new, well-funded projects, which add to the existing number of available projects in the construction and energy efficiency marketplace. To the degree that existing contractors and subcontractors in the marketplace have capacity to take on more work with current incumbent workers; AEP job “support” will result in more secure livelihoods for existing workers, but will probably not result in the need for new hires and/or new training and education.

“Job creation” occurs when the insertion of new, well-funded projects (on top of existing work in the marketplace) results in the need for companies to recruit and hire additional workers beyond their current workforces to meet the needs of new contracts. If there are a sufficient number of appropriately trained and

competitive workers who are “on the bench” (i.e. not currently working), job creation will probably turn to this group of workers first, before seeking newly trained workers.

“Job creation requiring new training” occurs when the type of new assignments entering the marketplace require new types of skills, technology knowledge, certifications, or experience which can not be found in the existing marketplace. Depending upon many factors, employers may choose to offer “green up” training to incumbent workers, or to recruit and hire graduates from training and education providers.

Breakout Group #1: Workforce Education and Training

I. Participants

Tony Ransom, Division of Capital Asset Management and Maintenance
Michael Doheny, Executive Office of Labor and Workforce Development
Jaime Stone, Accenture
Rainie Marchand, Division of Capital Asset Management and Maintenance
Tamika Jacques, Massachusetts Clean Energy Center
Krista Reichert, Bunker Hill Community College
Mark Gyurina, Operation Able
Christine R. Williams, Department of Higher Education
Mary Vogel, The Construction Institute
Elizabeth Wiley, Bristol Community College
Michael Chavez, Youth Build Boston
Joe Durant, Massachusetts Organization of State Engineers and Scientists
Susan St. Pierre, North Shore Community College
Les Warren, Bunker Hill Community College

II. Purpose

The Education and Training Breakout Group took on two assignments, including:

- A. **Discussion of Current Resources:** Identify currently available education and training providers with interest and expertise in creating and operating training programs relevant to AEP needs, and;
- B. **Workforce Education and Training Issues:** Identify and discuss issues and barriers to the development and delivery of appropriate training and education programs, and the placement of graduates into paid jobs.

III. Feedback

A. Discussion of Current Resources

The group recorded eight currently available training and education resources, some that were quite specific, and some that were general categories under which there are many specific providers. The eight noted resources were:

- 1) MassGreen Program
- 2) MA Community Colleges and Workforce Development Transformation Agenda
- 3) Community college programs (general)
 - a. Degree programs
 - b. Certificate programs
 - c. Individual classes and other offerings
 - d. Green Building and Energy Management Training programs
- 4) Building Performance Institute (BPI)

- 5) Training from professional and trades organizations
- 6) Community-Based Organizations
- 7) Partnerships between employers and selected training providers
- 8) Training provided directly by employers or equipment/control suppliers

Each of these is described briefly below:

(1) MassGreen Initiative (www.massgreentcc.com)

The MassGreen Initiative was created in 2009 with initial funding support from the Massachusetts Clean Energy Center (www.masscec.com) to develop a network of community college training programs prepared and equipped to offer job training in selected energy efficiency related fields, especially home weatherization. MassGreen headquarters are located at Springfield Technical Community College (STCC), which offers a slate of courses including Accelerated Weatherization Installer Course, Weatherization Installer Course, Running a Successful Weatherization Business, and Weatherization Crew Chief Course.

With the expected conclusion of funding from the MassCEC, the MassGreen Initiative in general, and STCC specifically, is seeking opportunities to expand MassGreen's offerings into training for commercial and industrial energy efficiency jobs and integrated facilities management. Providing training services to AEP employers is an option under immediate consideration.

Other community colleges that have been involved in MassGreen include: Roxbury Community College, Berkshire Community College, Bristol Community College, North Shore Community College, Greenfield Community College, and Quinsigamond Community College.

(2) MA Community Colleges and Workforce Development Transformation Agenda (www.mccwdta.org)

Massachusetts' 15 community colleges were awarded a \$20 million, three-year grant from the United States Department of Labor to implement the Massachusetts Community Colleges and Workforce Development Transformation Agenda (MCCWDTA). Coordinated by the Massachusetts Community Colleges Executive Office (MCCEO) and lead campus Quinsigamond Community College (QCC), the initiative is designed to assist trade impacted and other eligible residents of the Commonwealth to attain degrees, certificates and industry recognized credentials in two years or less.

"Clean energy", including energy efficiency, is one of the six industries targeted by the MCCWDTA.

Specific community colleges and programs involved in the Transformation Agenda program are:

Bunker Hill:	Energy and Sustainability Management (Credit certificate)
Greenfield:	Renewable Energy/Energy Efficiency (Credit certificate and degree)
	Weatherization Crew Chief Training (Noncredit certificate)
	Accelerated Weatherization Training-Whole House (Noncredit certificate)
	Weatherization Training-BPI Whole House (Noncredit certificate)
	Energy Auditor Training-BPI Energy Analyst (Credit and noncredit certificate)
	Solar Thermal Installer Training-NABCEP Entry (Credit and noncredit certificate)
	Solar PV Installer Training-NABCEP Entry (Credit and noncredit certificate)
Holyoke:	Sustainability Studies: Clean Energy (Degree)
	Solar Energy (Credit certificate)
	Wind Energy (Credit certificate)
	Clean Energy (Credit certificate)

MassBay: Solar Installation (Credit and noncredit certificate)
 Energy Auditor (Noncredit certificate)
 Electrician technician (Credit and noncredit certificate)

Mt. Wachusett: Energy Management (Noncredit certificate)

Quinsigamond: HVAC-Accelerated (Credit certificate)

Individually and collectively, the MCCWDTA community colleges are seeking to immediately link their programs to initiatives like the AEP which might hire trainee graduates and/or assist the community colleges in tailoring their programs to fit employer needs in energy efficiency.

(3) Standing job training/workforce development programs at community colleges

All of the state's community colleges have extensive workforce development and job training programs offering both credit and noncredit training. Many of these community colleges offer in training (and produce graduates) in fields such as plumbing, electrical work, HVAC, boiler work, and carpentry. These programs are easily identified through simple Google searches, through the state Department of Labor's "one-stop" career centers, or through the Massachusetts Community Colleges Executive Office.

In addition, many community colleges have created "clean energy" related degree, certificate and noncertificate programs beyond those mentioned above. A complete listing of these offerings can be found at www.cleanenergyeducation.org, where they can be sorted by different fields and technologies.

(4) Building Performance Institute (BPI) certification training

Some members of the group suggested that DCAMM should look into the network of training and certification created by the Building Performance Institute (BPI) as a source for meeting workforce and training needs in the AEP. Full details about BPI, including types of certification, directories of certified individuals and companies, a listings of training providers, can be found at www.bpi.org.

BPI offers certification in seven categories, including:

1. Building Analyst – go beyond a traditional energy audit to perform comprehensive assessments, identify problems at the root cause and prescribe and prioritize solutions based on building science.
2. Envelope – quantify performance and prescribe improvements to help tighten the building envelope (shell), stop uncontrolled air leakage and optimize comfort, durability and HV/AC performance.
3. Residential Building Envelope Whole House Air Leakage Control Installer – implement measures to tighten the building envelope to reduce energy loss from air leakage and also reduce pollutants and allergens through air migration. Improve thermal comfort and energy efficiency through the proper installation of dense-pack insulation materials.
4. Manufactured Housing – apply house-as-a-system fundamentals to the specific needs particular to the various types of housing technologies.
5. Heating – optimize the performance of heating equipment to help save energy and ensure occupant comfort, health and safety.
6. Air Conditioning and Heat Pump – understand the role of these systems within the whole home and how to diagnose and correct problems properly to achieve peak performance.

7. Multifamily – apply building-as-a-system fundamentals to diagnose problems and improve the performance of larger, more complex residential structures.

(5) Training programs from trade groups and labor unions

For many of the trades and professions needed by the AEP, training and apprenticeships are offered in both union and nonunion environments. The Construction Institute in Boston (<http://tcimass.org/node>) provides comprehensive information about training for construction careers, including a complete listing of all labor union-based apprenticeship programs in the construction trades in Massachusetts, found at: <http://massbuildingtrades.org>.

With an eye towards the “surge” nature of the AEP, and the desire to reach out to new audiences to create a more diverse workforce, a special initiative was mentioned which is described below in text from The Construction Institute website:

“If you don’t meet the requirements for apprenticeship training right now, there are resources that can help you qualify in less than six months. The Metropolitan Boston Building and Construction Trades Council (MBBTC) offers a free pre-apprenticeship program known as the 21st Century Building Trades Apprenticeship Preparedness Program (APP). The APP prepares young adults, minorities, women and people of low to moderate income to enter building trade apprenticeship programs. The 10-week program includes 60 hours of classroom instruction in the evenings and Saturday site visits to training facilities and construction projects. For more information call 617-282-2242.”

The Construction Institute is also a co-sponsor of the “Building Pathways” program, described in detail in the “FAQ” document below.



FREQUENTLY ASKED QUESTIONS

How can the Building Pathways Building Trades Pre-Apprenticeship Program help me begin a career in construction?

Building Pathways is a 7-week program designed to prepare qualified applicants for an apprenticeship in the building trades - the pathway to a rewarding career in construction.

Through Career Readiness and Occupational Skills Training, with classroom and hands-on learning experiences, Building Pathways will provide you with the knowledge and skills you need to enter into a state-registered Building Trades apprenticeship program. You will also receive coordinated case management and placement services to help you achieve your career goals.

Why should I explore a career in construction?

Many people think that the only way to a lifelong successful career is by going to college, sitting in a cubicle five days a week and moving up the office ladder.

But that’s just not true. Joining the building and construction trades can bring you a lifetime of economic security and satisfaction – with more action and hands-on experience than an office job. If you enjoy working with your hands, being part of a team, and building something you can be proud of, the building trades are for you.

There are many different options for careers in union construction and not every position keeps you on the job site. You can rise through the ranks to become a business manager or owner, which puts you in charge of hundreds of people and projects with budgets ranging into the millions. Whether you want to work with your hands or work in the corner office, the union construction industry has a career path for you.

What is a building trades apprenticeship?

No matter where you want to go you have to start at the beginning – the apprenticeship. Unlike any other program of its kind, the union apprenticeship allows you to ***earn while you learn***. First-year union apprentices earn approximately the same amount most college students' pay for a year's tuition.

Once you become an apprentice, you work and attend classroom training. The classroom training provides you the entry-level skills you need to get started. You also work under a skilled journey-level crafts person on the job, learning to become the very best in your craft.

With more than 23 trades to choose from, and 32 apprenticeship programs across Massachusetts, there is sure to be one that interests you. And, with a little help from us and

LOTS of dedication from you, you will be on path to a rewarding career in construction.

How much does it cost?

There is no cost for you to participate in Building Pathways. In fact, participants will receive a free set of tools and work boots. But there are a few limitations:

- Space is limited to no more than 20 participants
- You must be qualified to participate.
- Classes are taught in English

Who is eligible?

There are several minimum eligibility requirements that applicants must meet to apply to Building Pathways. You must:

- be low income
- be 18 years of age or older
- be a resident of greater Boston area
- be authorized to work in US
- possess a high school diploma or GED

You must also:

- possess a valid driver's license or learner's permit
- have an insured and operable vehicle (or a realistic plan to obtain a vehicle by the end of the program)
- have an interest in pursuing a career in the building trades
- be able to perform physically challenging work and tolerate weather extremes
- be drug-free and able to pass a drug test
- be proficient in math and English
- have no prior affiliation with a building trades union

How do I apply?

If you want to apply to Building Pathways, you must first attend an Information Session, complete an application form and produce proper documentation. **Applications are due by January 28, 2013.** Please submit the completed application form and all supporting documentation in one of the following ways (by hand delivery, mail or fax):

- Deliver to: The Construction Institute, 256 Freeport St., Boston, MA
- Mail to The Construction Institute, 256 Freeport St., Boston, MA 02122
- Fax to The Construction institute at 617-436-4163

Applications must be received by 5 pm on January 28th.

How are applications evaluated?

Those applicants who meet the minimum eligibility criteria will move to Step 2 of the application process. At this step each applicant will be evaluated based upon their responses to application questions, reference(s), and his/her commitment to the selection process.

Applicants who receive a positive evaluation in Step 2 must then pass a series of tests before proceeding to the final step of the application process, which is the interview. The Step 3 tests include the Test of Adult Basic

Education (TABE), with specific focus given to reading, math, and language scores. In addition, applicants must pass a drug test and a physical aptitude test.

The interview portion of the application process consists of questions administered by experienced construction industry personnel and our staff. Applicants are asked questions specifically designed to identify obstacles which may impede their progress through the program – and ultimately- through an apprenticeship or job readiness opportunities.

What training will I receive?

Once you are admitted to the program, you will receive 7 weeks of comprehensive training designed to prepare you for entry into apprenticeship. Instruction will be delivered on Monday – Friday from 7 am – 3:30 pm.

We will teach in two ways: classroom training and hands-on activities. We will start off with employment and interpersonal skills training which will allow you to practice not only résumé writing and interviewing skills, but such essential skills as teamwork, workplace problem-solving, effective communication, as well as other life skills. The hard skills training will introduce you to the duties and responsibilities of the various building trades and the apprenticeship model, and provide instruction in the types and components of a construction project, workplace safety and health, basic construction math, construction tools, blueprint reading, labor history, the impact of alcohol and drug abuse, workers' rights, and workforce diversity.

The hands-on learning component will consist of shop classes at participating apprenticeship training centers. You will also take field trips to various building trades apprenticeship programs and active construction sites which will allow you to experience what each trade entails.

When and where do classes take place?

The 2013 training cycle will begin with an Orientation Session on February 22nd. Classes will begin on Monday, February 25th and end on with graduation on April 12th. Training will take place at the Joseph M. Tierney Learning Center located at 125 Mercer Street, South Boston.

Will I receive any other services through Building Pathways?

Case management services will be provided as needed for each participant beginning at the start of the program and through successful placement. Case management will include counselling and/or referral and follow-up for issues such as childcare, transportation, housing, healthcare, financial services, and legal services.

We will also work with you to secure admission into a building trades apprenticeship program.

(6) Community-Based Organizations (CBOs) and other Non-Profit Groups

Several in the group noted that CBOs were leaders in providing job training to low-income people, immigrants, young people, previously incarcerated individuals, lower-skilled job seekers, people of color, and the unemployed.

There are many CBOs with job training programs relevant to the energy efficiency and green building industries in Massachusetts. They are cataloged and described online at www.cleanenergyeducation.org.

The most frequently referenced program was YouthBuild, which is described below.

YouthBuild was authorized as a federal program in 1992 under Subtitle D of Title IV of the Cranston-Gonzalez National Affordable Housing Act. First authorized under the US Department of Housing and Urban Development, the federal YouthBuild program was transferred to the US Department of Labor in 2006 and is administered by the Employment and Training Administration.

In YouthBuild programs, low-income young people ages 16 to 24 work full-time for 6 to 24 months toward their GEDs or high school diplomas while learning job skills by building affordable housing in their communities. Emphasis is placed on leadership development, community service, and the creation of a positive mini-community of adults and youth committed to each other's success. Students may earn AmeriCorps education awards through their homebuilding and other community service. At exit, they are placed in college, jobs, or both.

YouthBuild has 273 program sites around the country, including 11 in Massachusetts (Lowell, Worcester, Boston (Roxbury), Brockton, Fall River, New Bedford, Lawrence, Quincy, Springfield, Salem, Cambridge). Each of the local sites are deeply rooted in their local communities, have local leadership boards with influential executives from the public and private sectors, and have working partnerships with the construction industry.

Links to the Massachusetts YouthBuild sites are provided in the table below.

Mass Youth Build Link	Mass Youth Build Name	City	State
CTI YouthBuild of Greater Lowell	Community Teamwork, Inc.	Lowell	MA
Worcester YouthBuild Partnership	Training Resources of America, Inc.	Worcester	MA
Youth Jobs Program	North Shore Community Development Coalition	Salem	MA
YouthBuild Boston	YouthBuild Boston, Inc.	Roxbury	MA
YouthBuild Brockton	Old Colony YMCA	Brockton	MA
YouthBuild Fall River	Old Colony YMCA	Fall River	MA
YouthBuild Just A Start	Just a Start Corporation	Cambridge	MA
YouthBuild Lawrence AmeriCorps	Lawrence Family Development and Education Fund Inc.	Lawrence	MA
YouthBuild New Bedford	People Acting in Community Endeavors, Inc.	New Bedford	MA
YouthBuild Quincy	Training Resources of America, Inc.	Quincy	MA
YWCA YouthBuild Springfield	YWCA of Western Massachusetts	Springfield	MA

(7) Partnerships between Employers and Training Providers

The participants in this group noted that some of the strongest job training efforts involved tight collaboration between larger employers and education providers. For example, the utility company NStar has a unique relationship with Bunker Hill Community College to recruit, train and hire selected individuals for specific job titles. NStar personnel are linked with BHCC in program design, curriculum development, instruction, and post-graduation career assistance.

Others noted that certain employers, and groups of employers, had developed close relationships with specific community colleges and with private institutions like Benjamin Franklin Institute of Technology, Mass Maritime Academy, Worcester Polytechnic Institute, and relevant vocational-technical high schools.

The larger point, however, was that DCAMM should assist the development of a tight sense of community between the contractors involved with the AEP and the final group of education and training providers that emerges to serve them. If the AEP can serve as a launching point for relationships that grow and deepen over time, all parties will be well served, even if the total number of graduates placed as workers on AEP projects is relatively small.

(8) Job Training Provided Directly by Employers to New and Incumbent Workers

Although it was not recorded on the flip charts, more than one of the participants in this group noted that many of the employers likely to be involved in the AEP – especially the larger companies – were well positioned to provide their own training to new hires.

They suggested that the very limited time frame of the AEP increased the probability that companies might not have the time and desire to engage outside training and education providers. Instead, they would seek to hire people with some significant experience and train them in their own processes and technologies, or to provide some “green up” energy efficiency training to incumbent workers and subcontractors. This was framed as something for both AEP and training providers to keep in

mind when developing a strategy.

(9) Career and Vocational Technical Education Schools

Although no mention of them was recorded on the flip charts from the Advisors Meeting, mention should be made of the training programs of interest to the AEP which are offered through the state's 77 approved Career and Vocational Technical Education Schools. The fact that these schools have facilities and programs located all over the state, and that most of them are already involved in some of the AEP fields suggests that they could be a resource for meeting training needs. A full directory is online at:

<http://profiles.doe.mass.edu/search/search.aspx?leftNavId=11238>

B. Workforce Education and Training Issues

The break-out group identified five central issues which they felt needed attention if the AEP decided to go forward with a program of supporting job training aimed at providing a larger workforce of available candidates for the AEP "surge" effort. The issues were:

- Funding for training, especially including stipends for trainees.
- Changing opinions about the value of, and need for, specific credentials. Credentials are in flux.
- Lack of solid information about employer's future workforce needs.
- Need for articulation agreements that allow acceptance and transfer of credit among providers.
- An effective process for keeping track of graduates who may still be available for work.

1. Funding

The question of "who pays?" for training and education is a perennial concern of both training providers and students/job seekers. A related issue is controlling the cost of training while still guaranteeing high quality. Finally, breakout group members noted that training programs which offer paid stipends to trainees in "on the job" settings are widely perceived to be the best for employers, trainees and providers.

Funding issues are a special concern for education and training institutions that want to create new programs and enter new markets. Taking this action almost always requires outside funding from foundation or government grants.

Government and foundation grants usually come with serious outcome requirements related to number of trainees recruited, served and placed in jobs after graduation. They often have additional requirements involving who must be served, with a focus on low-income individuals, local residents, people displaced for specific industries, lower-skilled workers, women and minorities, and/or people who are currently receiving unemployment insurance.

Finally, grant-funded efforts are usually short-term in nature, often providing funds for as little as one year, and rarely more than three. When the funding runs out, the program may be unable to survive.

Having seen this "boom and bust" cycle during the 2008-2012 spike in "green jobs" training funds, training providers and funders alike are justifiably wary of investing again unless there is a clear and unmistakable signal from employers that graduates from training programs have a reasonable probability of being hired after training is concluded. This wariness was on display in the breakout group discussion.

An alternative means of funding education and training programs is by recovering a large percentage of program costs directly from student tuition and/or fees. Under this model, the decision to offer

training involves an assessment of whether the training program offered will be popular enough to fill the minimum number of seats needed to cover costs. The most successful tuition-funded training programs successfully make the argument that completing the training will either (a) allow the student to secure a license or certification required or preferred by employers in the field, or (b) provide specific skills and knowledge which employers desire when recruiting new employees.

Tuition-funded training programs are often extremely short and frequently have a narrow focus on preparing students to successfully take an exam for a desired certification. This kind of training also lends itself to online instruction that pushes costs down significantly.

Even if expenses are pushed down by technology, costs for tuition-funded training can often be too high for lower-income people and the unemployed. In addition, the training itself is often not enough to be competitive for jobs, since employers prefer people with both experience and training. Finally, access to training is limited if the training locations are not reasonably nearby, offered at convenient times, and accessible by public transportation. Without subsidies and some connection to real world experience, many of the people most in need of training to enhance their career prospects are left out or underserved by available options.

2. Credentials are in flux.

When making decisions about entering a training marketplace, providers depend on signals drawn from:

- Direct contact with local employers expressing a need for specific skills, credentials or licenses.
- Reliable information drawn from industry/professional organizations, labor unions, job postings, and labor market studies on skill/credential/licensing needs.
- Anecdotal information about “skills gaps” drawn from media reports, conference presentations, online sources, friends and colleagues.

The decision making process is easiest when large groups of employers in an industry subsector (and the government agencies that regulate or oversee them) are in agreement that a specific credential is required to be competitive for a job in a particular field.

In the absence of a clear certification requirement, prospective training providers ask:

Are there certifications that are strongly preferred, even if not required?
Are the certifications that give candidates an advantage, even if not strongly preferred or required?
Are there “demonstrated skills” that are clearly desired, even if not embodied in a certification?
Are there programs being used by employers to recruit new hires even in the absence of signals above?

Participants in the breakout session noted that credentialing in the commercial/industrial/government building energy efficiency world appeared to be either non-existent or in flux, making it extremely hard for individual training providers to develop programs. Some of the possible credentialing bodies which might be looked to include: Interstate Renewable Energy Council (IREC), the US Department of Energy, Building Performance Institute (BPI), National Renewable Energy Laboratory, Leadership in Energy and Environmental Design (LEED), Association of Energy Engineers (AEE), Building Operators Certificate (BOC), and others.

In the absence of new “energy efficiency” credentialing, education and training providers can still rely on licensing and credentialing requirements in specific skilled trades (e.g. electricians, plumbers, etc.), as well as on professional degree requirements for engineers (mechanical, electrical, environmental, etc.).

The credentialing issue is not likely to be resolved in time for training providers to create new

programs just for AEP. One option, of course, would be for DCAMM and/or the DCAMM AEP itself to create one or more credentials of its own and incorporate these as requirements or preferences in AEP contracting.

3. The long term workforce and training needs of energy efficiency employers are unknown.

The breakout group called for an ongoing process of detailed employer surveying to provide regularly updated information about workforce needs to the training community. One time surveys like the one DCAMM contractors may perform for the AEP are helpful, but of limited utility to training providers who would prefer to make longer-term investments in training for career areas that are likely to have hiring needs for over many years, either because of growth, expected attrition, or both.

A separate breakout group about employer survey design and implementation was set up during the January 31 Advisors Meeting. See information about the results of that breakout group in the “Survey” section of this report.

4. Need for articulation agreements among providers

Articulation agreements are approved arrangements that allow credits earned in one training institution to be transferred, and counted as credit in, another institution’s program. These agreements can be among and between: colleges and universities, community colleges, career and vocational technical schools, high schools, labor union training programs, apprenticeship programs, continuing education offerings, and other providers.

Articulation agreements help individual students immensely by offering a clearer (and less expensive) pathway to higher levels of education without the need to continually “start over” to meet requirements of individual institutions which vary only slightly from the education received at a different provider.

The breakout group noted that there far too few articulation agreements among the training providers in fields related to the AEP’s energy efficiency focus. More are needed.

5. Need for better systems to track and locate past graduates of training programs.

Job placement and career advancement are the ultimate metrics of success for many education and training providers in the professional and vocational fields addressed by the AEP and DCAMM in general. In addition, employers are often interested in identifying and interviewing program graduates for job opportunities. With both of these things in mind, participants in the breakout group pointed to the need for better systems to track the career progress and current availability of past education and training program graduates.

As an example, significant “green job” training resources have been invested over the last four years by federal, state and local governments; in partnership with community groups, foundations and local employers. Many of these programs have been excellent training opportunities, providing needed 21st Century energy efficiency skills to trainees and/or introducing new entrants to career opportunities.

Unfortunately, these grant-funded training programs were carried out during a deep economic recession when hiring levels were dismal, especially in building related careers. Many of the newly trained, therefore, may not have found permanent employment – even with their new skills and knowledge. It is probable that many are now either unemployed, underemployed or employed in an unrelated job area. If an effective program of tracking alumni was in place, graduates could easily be contacted for new job opportunities, like those that might arise under the AEP.

Breakout Group 2: Creating Workforce Development Need Surveys for the AEP

I. Participants

Jennifer Price – Massachusetts Executive Office of Labor and Workforce Development
Laura Younger – Massachusetts Division of Capital Asset Management and Maintenance
Kevin Bernier - Penley Systems
Ahmad Barnes – MA Executive Office of Employee Relations

II. Purpose

This breakout group was asked to provide advice to AEP on the creation of one or more surveys AEP is considering conducting. It was understood that these projects might include:

- (1) Surveys of known and potential AEP contractors and subcontractors to determine:
 - hiring needs over the course of the AEP and (potentially) in years beyond, and barriers to meeting those needs;
 - industry structure of job titles, career opportunities, compensation, and career pathways;
 - training needs for new and incumbent workers over the AEP and (potentially) beyond, and barriers to meeting those needs;
 - current activities, future needs, and barriers related to meeting AEP diversity hiring goals;
 - current activities, future needs and barriers related to meeting AEP M/WBE goals.
- (2) Surveys of known and potential training providers to determine:
 - Current capacity to provide well-trained candidates for AEP hiring needs, including diversity;
 - Interest in, and barriers to, developing new training capacity to meet AEP needs
- (3) Potential Internal DCAMM and/or State of Massachusetts surveys that link with DCAMM's Integrated Facilities Management (IFM) Initiative

Beyond the specific suggestions detailed below, all of the members of the breakout group confirmed the importance and value of seeking information from employers and service providers directly through surveys. They felt that this was an important activity of the AEP Workforce Advisors.

III. Feedback

A. Survey Issues to Consider

There were several pieces of general advice considered critical to all workforce development surveys. Ignoring these points could result in bad survey results and wasted time and money. These included:

1. Be completely clear about the purpose of the survey(s). Includes: Who is the information for? What will you do with it? What is the **most important** information need in the survey?
2. Be sure that the questions, if answered correctly, will provide the information needed.
3. Don't mix together too many needs in the same survey.
4. Be sure that the survey goes to the correct recipient at each employer organization. Have a good database before beginning. Send to someone who can and will answer.
5. Keep the survey brief. Don't ask too many questions.
6. Make the survey easy to respond to. If you can, avoid questions that stop the person answering in their tracks or require them to stop to go gather information from files. Ask fewer open ended questions.

7. Consider whether a survey is the best method of gathering information. Interviews? Focus groups?
8. Consider in advance if this is a one-time survey, or the beginning of an ongoing process with updates.
9. Will you survey just a few representative employers or capture a big group of AEP contractors?

B. Regarding a Possible Survey of Contractor and Subcontractor Hiring Needs

1. If feasible, ask for characterization of current workforce by # of people in different job titles.
2. Keep survey focused on hiring needs. Don't cross over into training needs.
3. Consider whether survey is just for the AEP (next 2-3 year years), or is more general.
4. Consider whether to divide contractors into different categories or lump together as "contractors".
5. Survey different for larger contractors than for specialty subcontractors? Decide.
6. Keep questions focused on hiring "behavior" (actual hiring, with numbers, when possible).
7. Measure hiring needs against common job types/job titles. Develop these with employer advisors.
8. Measure hiring needs against common licenses and certifications. Use employer advisors. Ask whether licenses and certifications are "required" or "preferred". Important!
9. Use survey to identify skills needed, either within jobs, or across many jobs. Use employer advisors.
10. Use survey to identify emerging technologies that new hires need to know. Use employer advisors.
11. Use survey to identify "level of difficulty" in hiring. Provide a spectrum.
12. Use survey to identify "reasons for difficulty" in hiring. Provide options to choose from.
13. Use survey to identify differences in hiring barriers in different geographic regions of the state.
14. Ask "surge" questions to determine at what level of new work hiring might be needed at all.
15. Ask "surge" questions to determine at what level of new work hiring needs become a barrier.
16. Use survey to determine current sources of seeking new workers. Provide options. By job title?
17. Ask whether any jobs have been left unfilled because of inability to find appropriate person to hire.
18. Should there be questions about wages and benefits?

C. Regarding a Survey of Career Paths for Contractors and Subcontractors

1. Consider whether survey is **creating** career pathway diagram, or **confirming** suggested model.
2. Who is this information for? Who needs it, wants it?
3. Ask question re: how employees get promoted. Pathway of promotion.
4. **Role** of unions and union procedures.
5. Will the survey include state government jobs? Other government jobs? Collaborate with union?
6. Ask questions regarding ability of workers to go from project, seasonal or part-time to full-time.
7. Should there be questions about wages and benefits?
8. Consider the experience of ARRA funded jobs/contractors. Cautionary tale for career paths?

D. Regarding a Survey/Catalog of Existing Collaborations Between Contractors and Other Organizations to Respond to Barriers

The breakout group was unclear about whether this information required a survey, and whether it could be answered through interviews, case study development or some other means. They were clear that it was important to gain an understanding of the current ways that contractors were

collaborating with educators, training providers, Youth Build, activists, and state government to overcome barriers to hiring and meeting contract goals.

E. Mentoring

Members of the group were interested in gathering information about “mentoring as part of contracting”. We understood this to mean that the AEP initiative offered opportunities for state employees, contractors and subcontractors to serve as mentors to students, young people and/or facilities managers and staff in the course of fulfilling AEP contracts.

While acknowledging the power of such mentoring, the notes indicate that at least one person asked how incorporating mentoring activities into AEP projects might impact delivery of core services and timely fulfillment of contracts. There was also a question raised about how transportation services and costs would be handled.

Breakout Group 3: Outreach to Existing Minority and Female Workers to Increase Diversity Hiring

I. Participants

Jill Alexander – K. Courtney and Associates
Mukiya Baker-Gomez – Massachusetts Division of Capital Asset Management and Maintenance
Andrea Laing – Massachusetts Division of Capital Asset Management and Maintenance
Cheryl Lieteau - Carpenters Union Local 218
Hope Davis – Massachusetts Division of Capital Asset Management and Maintenance

II. Purpose

All contractors participating in the AEP are required to meet diversity hiring goals. These goals are in addition to the goals for utilizing Minority and Women Owned Business Enterprises (M/WBE) discussed in the final section of this report. Even without the diversity hiring goals, DCAMM has a strong interest in contributing to all efforts to diversify the building management, construction and energy efficiency workforce in Massachusetts.

The breakout group worked to identify some of the known resources for accessing minority and female workers who are skilled, well-trained, and experienced in job areas needed by the AEP. In addition, the group discussed barriers to increased diversity and brainstormed some ideas about creative ways to overcome those barriers.

III. Feedback

A. Labor Union Resources

The group noted that one starting point for reaching out to existing workers from diverse backgrounds was through the labor union locals and building trade councils across the state. Working with managers at these resource organizations, one can get an assessment of the current diversity of the unionized trade workforce, including those at both the Journey person and Apprentice level.

A complete directory of contacts for the state's ten Building Trades Councils and for the Locals representing Boilermakers, Bricklayers, Carpenters, Elevator Construction, IBEW, Insulators, Ironworkers, Laborers, Operating Engineers, Painters, Plumbers/Pipe Trades, Plasterers, Roofers, Sheet Metal workers, Teamsters, can be found at:

http://massbuildingtrades.org/affiliate_listing

A full list of all union building trades and related apprenticeship programs is online at:

<http://massbuildingtrades.org/directory-apprenticeship-programs>

The history of racial and gender diversity in the unionized construction trades has not been without its controversies, but the breakout group agreed that the Councils and Locals were unquestionably a source of talent and ideas for diversifying the AEP contractor and subcontractor workforce.

B. Diversity Hiring Resources Beyond Trade Unions

The group discussed three broad categories of ideas:

1. Identifying skills which appear to be needed by professions and trades involved in energy work.
 - a. Identify common skills
 - b. Identify “transferrable” skills

2. Increasing enforcement of diversity hiring goals to spur compliance and unleash innovation.
 - a. Look at monetary penalties for employers who don't meet goals
 - b. Help business owners promote/require absolute compliance with workforce goals
3. Increase minority and female involvement in apprenticeship and pre-apprenticeship programs.
 - a. Expand existing pre-apprenticeship and apprenticeship training programs state-wide
 - b. Develop programs to help workers transition for seasonal employment to permanent

This group also identified many of the same resources noted by the other groups for deeper partnerships, including pre-apprentice training programs like "Building Pathways", programs at Vocational Schools, and creative use of the state's network of "one-stop" career centers serving people on unemployment insurance and job seekers in general.

The group also suggested looking into the services of the organization Wider Opportunities for Women, a national organization with program aimed at advancing job training for women (www.wowonline.org).

Breakout Group #4: Improving Participation of Minority and Women-Owned Businesses in AEP

I. Participants

Bob Cahill - Massachusetts Division of Capital Asset Management & Maintenance
Ron Marlow - Executive Office for Administration and Finance
Sandra Duran - Massachusetts Division of Capital Asset Management & Maintenance
Andre Porter - Office of Small Business and Entrepreneurship
Reggie Nunnally - Massachusetts Supplier Diversity Office

The participants indicated that a complete breakout group to discuss these issues would also include an appropriate person who works on M/WBE compliance issues and technical assistance to contractors.

II. Purposes

Contractors in the AEP will be required to meet goals for the involvement of Minority and Women Owned Business Enterprises (M/WBE). The breakout group discussed:

- A. Current resources available to meet and exceed M/WBE goals
- B. Barriers to achieving these goals
- C. Possible follow-up steps

The participants also included some discussion about increasing the involvement of Small Business Enterprises (SBEs), as part of this breakout group.

III. Feedback

- A. Discussion of M/WBE goal of 10.4%.

Much of the group's discussion assumed familiarity with the current M/WBE goal of 10.4% for construction projects, what that goal means, where it came from, what it includes, and other details. As a reference for other Advisors, an excerpt for the DCAMM website can be found immediately below.

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The Division of Capital Asset Management and Maintenance (DCAMM) along with the Supplier Diversity Office and the Office of Access and Opportunity have announced revised goals for Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) participation on certain state funded building construction projects. MBE and WBE firms are firms that meet required criteria for ownership and control by minorities and or women and have been so certified by the Commonwealth's Supplier Diversity Office. More information about MBE/WBE certification and a list of MBE/WBE certified firms is available on the Supplier Diversity Office's website www.mass.gov/sdo.

Public construction and design projects undertaken by DCAMM and other public awarding authorities, including municipal projects receiving state funding, provide significant opportunities for MBE and WBE firms to participate on these projects*. DCAMM has had a long standing program that ensures that minority and women owned businesses have real and meaningful opportunities to work on agency building construction projects.

Effective January 1, 2012 building construction projects undertaken by DCAMM and other state funded building projects, including state funded municipal projects have [revised MBE and WBE participation goals](#) . The new goals are as follows:

Construction Projects – 10.4% combined MBE & WBE participation

Design Projects – 17.9% combined MBE & WBE participation

The revised goals are the result of a disparity study that was undertaken by a nationally recognized firm to evaluate the status of minority and women owned businesses in the building construction and design industry within the Commonwealth. The disparity study results supported a revision to DCAMM's and the statewide MBE/WBE participation program goals. [DCAM Disparity Study Executive Summary](#)

The combined goals can be met by utilizing a reasonable representation of both MBE and WBE firms. The public awarding authority will make the determination if the proposed participation of MBE and WBE firms is reasonable. Utilization of all MBE or all WBE firms will not be considered a reasonable representation of MBE and WBE firms. If the prime contractor or designer is itself an MBE or WBE firm, it will still be required to provide participation by a firm or firms that does not hold the certification it holds.

Participation by MBE and WBE firms will continue to be tracked, reported and monitored separately to ensure that both MBE and WBE firms are participating on these projects. Not every project will have the full MBE/WBE goals set forth above as certain projects due to their size, scope or geographic location may have reduced goals, or in some cases no goals, as determined by the public awarding authority.

As a further description of how contractors might seek to meet goals on a specific project, the group imagined a \$10,000,000 energy related construction project with a 10.4% M/WBE goal of \$1,400,000. They noted that the goal would be applied against the life cycle of the project by involving M/WBE firms in such categories as: electrical equipment, permitting, supplies, plumbing, landscaping, monitoring and verification, and other categories.

The notes indicate that the group questioned whether “maintenance” M/WBE participation would count against goals.

B. Current Resources

The group identified several resources available to AEP leaders and contractors to assist in meeting M/WBE goals, and increasing involvement of Small Business Enterprises. They noted that there are certainly others not identified in the short time available at the meeting. Identified resources (described briefly below) include:

1. Massachusetts Supplier Diversity Office (<http://www.mass.gov/sdo>)

[The Supplier Diversity Office \(SDO\)](#) is an agency within the Operational Services Division which promotes the development of certified minority-owned (MBE), women-owned (WBE) and minority-women-owned (M/WBE) business enterprises, including minority-controlled (M/NPO), women-controlled (W/NPO) and minority-women-controlled (W/NPO) non-profit organizations. It does this by facilitating their participation in Massachusetts business and economic development opportunities. Specifically, SDO offers services in certification, enforcement, business assistance and advocacy.

Certification is the process by which SDO reviews and investigates applicants who seek to participate in affirmative business opportunities to determine that they meet the requirements of state and federal statutes and regulations. SDO certification is a marketing tool used to enhance a firm's ability to do business in public markets. Although certification does not guarantee that a business will be successful every time it bids, it may add a competitive edge to firms seeking contracts with the government.

Finally, SDO publicizes a directory of certified minority- and women-owned business enterprises and certified minority- and women-controlled non-profit organizations on its website. The website also lists information on how to become certified and provides a calendar of workshops held around the state.

2. Massachusetts Office of Small Business Enterprise and Entrepreneurship

The mission of the Office of Small Business & Entrepreneurship (OSBE) is to create policies and programs to support small businesses & entrepreneurs across the Commonwealth of MA. OSBE is a valuable resource for Small Business Community, and utilizes the following business development tools: Small Business Assistance Advisory Council, Technical Assistance Grants & Office, and MA Small Business Development Centers.

3. Greater New England Minority Supplier Development Council (<http://www.cmsdc.org/index.php>)

The GNEMSDC is a non-profit affiliate of the National Minority Supplier Development Council (NMSDC). Its membership consists of local and national Fortune 500 corporations, government agencies, universities, financial institutions, associations and organizations. Since 1974, GNEMSDC has provided services to these members and to our certified minority business enterprises (MBEs). The Council is governed by a Board of Directors and funded by corporate membership dues, certification fees, contributions, in-kind services and grants. The GNEMSDC serves the entire six New England States: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

4. DCAMM Office of Contractor Certification (<http://www.mass.gov/anf/property-mgmt-and-construction/design-and-construction-of-public-bldgs/contractor-certification>)

Contractors wishing to submit prime bids on public building projects estimated to cost more than one hundred thousand dollars (\$100,000) for the construction, reconstruction, installation, demolition, maintenance, or repair of any publicly owned building must first be certified by the Division of Capital Asset Management and Maintenance (DCAMM). Certification is also required for filed sub-bids. The certification process is conducted by DCAMM Contractor Certification Office.

5. Massachusetts Minority Contractors Association (<http://www.massmca.org/about.html>)

Full information about the MMCA can be found by going to the website above. The MMCA is tied into activities of DCAMM and the Supplier Diversity Office. It includes services to female contractors also.

6. Minority Business Development Agency Business Center (Boston) (<http://www.mbda.gov/businesscenters/boston>)

The Boston MBDA Business Center is a program federally-funded by the U. S. Department of Commerce's Minority Business Development Agency (MBDA) and operated by the Greater New England Minority Supplier Development Council (GNEMSDC). The Council has been dedicated to serving MBEs in New England for over 35 years.

The Center provides enhanced access to vetted, highly capable and competitive MBEs, which will help drive the buyer's business through competitive pricing, innovation and quality goods and services. The Center will also provide strategic advice on supplier diversity programs to help make buyers more effective and efficient in meeting its goals.

MBE Eligibility

The Boston Business Center offers services to MBEs owned and controlled by US citizens or resident aliens admitted for lawful admission to the United States and that fall into specific ethnic minority groups: African Americans, Hispanic Americans, Asian and Pacific Islander Americans, Native Americans (including Alaska Natives, Alaska Native Corporations and Tribal entities), Asian Indian Americans and Hasidic Jewish Americans. See 15 CFR § 1400.1-.2 and Executive Order 11625.

Although the Boston Business Center can offer services to all MBE firms, target clients include eligible MBE firms with one or both of the following characteristics:

- Annual revenues of over \$1,000,000 or
- On track for rapid growth, with the capability of generating significant employment and long term economic growth.

The Center will provide enhanced access to vetted, highly capable and competitive MBEs, which will help drive the buyer's business through competitive pricing, innovation and quality goods and services. The Center will also provide strategic advice on supplier diversity programs to help make buyers more effective and efficient in meeting its goals.

7. Center for Women and Enterprise – Boston (www.cweonline.org)

The Center for Women & Enterprise is a nationally known nonprofit organization dedicated to helping people start and grow their businesses. CWE has worked with more than 28,000 Massachusetts and Rhode Island entrepreneurs since 1995. CWE's mission is to empower women to become economically self-sufficient and to prosper through business and entrepreneurship. They provide a variety of services including: Education, Training, Technical assistance, and Women's business enterprise certification.

8. Next Street (www.nextstreet.com)

Next Street is a for-profit business that aims to maximize the growth, profitability and success of our portfolio companies, thereby enhancing economic development, wealth and job creation in America's cities. In 2005, Tim Ferguson, Putnam Investments' former head of investments, and Ron Walker, Executive Vice President of retail banking at Sovereign Bank, formed Next Street to serve successful urban businesses that were being largely ignored by traditional financial institutions.

A merchant bank for the urban enterprise. Next Street looks for companies in the \$5 million to \$60 million range with the potential for significant growth. To realize this potential, we provide far more than access to capital. We work side-by-side with the business owner, advising on every aspect of the enterprise: business strategy, organizational development, and marketing.

As of summer, 2011, Next Street had provided over \$130 million in capital for 80 employers that now generate approximately \$600 million in annual revenue, and jobs for 4,000 people. Most are located in low-income areas. Two thirds are women- or minority-owned businesses. One third are nonprofit organizations. The firm continues to advise more than half of the clients that we have ever worked with.

C. Issues and Institutional Barriers

1. Limited M/WBE firms in important AEP categories. Use of the same M/WBEs to meet goals over and over again.
2. Perception issues regarding purpose of M/WBE and quality of available contractors.
3. Role of "manufacturer approved" contractors in maintenance and other contractor areas and relationship to M/WBE certification program. Possibility of engaging "approved" maintenance vendors?

4. Incorporating utility vendors into M/WBE program for the AEP. Adding additional utility vendors a possibility?
5. Need to identify and plan for complex legal, regulatory and common practice issues that may need reform and improvement. This will take time to sort out.
6. Need to include the compliance team in anything we do in this area.

D. Need for an ongoing group?

The breakout group strongly felt that the AEP and DCAMM in general could use an ongoing group to tease out these issues, create stronger partnerships with helpful organizations and agencies, expand the number of M/WBE businesses available in important AEP categories, and generally improve results.